

In The Claims:

1. A battery separator comprising:
a microporous polyolefinic membrane having a porosity
in a range of 30 - 80%, an average pore size in a range of 0.02 -
2.0 microns, and being made from a blend of a polyolefin polymer,
and an oligomer of a polyolefinic polymer.
2. A battery separator comprising
a microporous polyolefinic membrane having a porosity
in a range of 30 - 80%, an average pore size in a range of 0.02 -
2.0 microns, and being made from a blend of a C₁ - C₇ based
polymer and a C₁ - C₇ based oligomer.
3. The separator according to Claims 1 or 2 wherein said
separator having a shutdown temperature less than the melting
temperature of said polymer.
4. The separator according to Claims 1 or 2 wherein said
separator having a thickness less than 3 mils.
5. The separator according to Claims 1 or 2 wherein said
membrane being one layer of a multilayered separator.
6. The separator according to Claims 1 or 2 wherein said
blend having 50% or less by weight of oligomer.

b
D2 7. The separator according to Claims 1 or 2 wherein said polymer being a polyethylene.

b
D2 8. The separator according to Claims 1 or 2 wherein said oligomer being a polyethylene wax having a molecular weight less than 6000.

D2 500 9. A battery separator for a lithium rechargeable battery comprising a microporous polyolefinic membrane having a shutdown temperature of less than about 130°C, a porosity in a range of 30 - 80%, an average pore size in a range of 0.02 - 2.0 microns, and being made from a blend of a high density polyethylene polymer and a polyethylene wax having a molecular weight less than 6000.

b
D2 10. A battery comprising:
an anode;
a cathode;
a separator according to Claims 1 or 2, said separator being disposed between said anode and said cathode; and
an electrolyte in ionic communication with said anode and said cathode via said separator.

b
D2 11. The battery according to Claim 10 being a lithium battery.